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January 7, 2020

Sydney Hanson, Transportation Archaeologist
Department of Archaeology and Historic Preservation
P.O. Box 48343
Olympia, Washington 98504-8343

Via email to Sydney.Hanson@dahp.wa.gov

Re: Cle Elum Westside Solar Project
DAHP Tracking Code 2019-05-03916

Dear Sydney Hanson:

Your review comments letter of December 10, 2019, was forwarded to me from Kittitas County Planner, Jeremy Johnston, regarding the archaeological survey our company conducted for the Westside Solar Project (Project). That survey was described in Archaeological Investigations Northwest, Inc. (AINW), Report No. 4246, which I understand was submitted to you by the County.

The four bullet items in your review letter consisted of one comment on the background section and three comments on the shovel testing. In our telephone conversation on Monday, December 16, 2019, it was agreed that the background section on prehistoric and historic context did not need to be changed. The other three comments on shovel testing are addressed below and are intended to clarify the approach AINW used in shovel testing for the subject Project.

Your review comments on shovel testing indicated that the number, depth, and descriptions of the shovel tests were inadequate. However, I believe that providing additional context to you regarding the shovel testing strategies used might allow you to agree that they are sufficient to meet the "reasonable and good faith effort" standard (36 CFR § 800.4(b)(1)) for identifying historic properties, including significant subsurface archaeological deposits. I realize that this federal standard does not apply to the current Project but thought it appropriate in the absence of specific state guidelines on shovel testing.

AINW's long-standing probabilistic approach to shovel testing for the purpose of discovery of subsurface archaeological deposits is based on two factors: (1) mineral ground surface visibility, and (2) likelihood for buried archaeological deposits to be present. In areas where mineral ground surface visibility is good, surface survey is used to identify potential subsurface deposits, as archaeological materials are typically shallow in the region. Often archaeological deposits are exposed at the surface through various types of bioturbation from burrowing animals and wind-thrown trees, to mention just a few of many such processes. Informal analysis of sedimentary depositional contexts and predictive modeling of archaeological site locations is used to identify high probability areas for subsurface archaeological deposits. High probability areas are in sedimentary depositional environments (as

opposed to erosional environments) and in areas where predictive modelling suggests people likely lived or worked. This approach differs from rote methods involving regular interval spacing of shovel tests across an entire project area which tend to be both expensive and inefficient. The AINW approach is intended to reduce the level of effort needed for labor intensive, and therefore expensive, archaeological excavations, including shovel testing, by focusing on areas most likely to contain undetected subsurface archaeological deposits.

For the Westside Solar Project, AINW initially provided an archaeological survey involving records review, pedestrian (surface) survey fieldwork, and reporting. After completing the surface survey fieldwork, AINW recommended shovel testing in two high probability areas identified along the southern margin of the Project parallel to the Project's road frontage along Westside Road. Although the Project will not utilize these high-probability areas for the solar arrays, they will be upgrading the existing driveway to meet the current Kittitas County Code and allow for all-weather access to the Project. Because of the construction associated with the driveway improvements, the Project proponent agreed that shovel testing in these areas would help to insure against inadvertent discoveries during the improvement of the access drive. Therefore, AINW returned to the field to excavate eight shovel tests, four in each of the two high probability areas. None of the shovel tests produced evidence for archaeological deposits.

The two high probability areas were identified based on a lack of good ground surface visibility due to dense vegetative cover and based on their association with a small ephemeral stream providing both a sedimentary depositional environment and a likely location for past human activity. The fine-grained alluvial deposits built-up on the stream margins contrast with the gravelly erosional surfaces occurring across the majority of the Project area north of the high probability areas. The erosional surfaces in the north appear to represent relict meander channels of the Yakima River with characteristic clast-supported alluvial gravels exposed at the surface. Most of the fine sediments were previously removed by fast-running water while the river was running in this location. The thin mantle of fine sediments in this area suggests that this relict channel was abandoned recently or may still be subject to energetic erosional flooding. The current active channel of the river is located about a half mile north of the Project area.

Most archaeological predictive models, including the DAHP statewide model, use proximity to natural water bodies as the main factor in predicting archaeological site locations. While the entire Project area is proximal to the Yakima River now, and in the past, archaeological deposits that may have been present in the northern Project area have likely been removed during the river channel migration across this area. The far southern portion of the Project area appears to have escaped the major erosion caused by Yakima River channel migration and retains sediments associated with the small stream there. This is the area where shovel testing was expected to be the most effective and where the high probability areas were defined.

In order to compare the methods and results described in AINW Report No. 4246 with previous nearby cultural resource surveys, I collected data from the WISAARD (12/31/19). The closest six previous surveys date from 1998 to 2018 and covered a total area of approximately 906 acres. Subsurface explorations consisted of 5 augers and 13 test units in total for all 6 projects. No artifacts were found in the auger excavations. The test units were dug within a known historic-period railyard to look for

archaeological features. Although no subsurface exploration was done for the majority of the surveys, 7 resources were identified. I also looked at the 23 closest previously recorded archaeological resources which are all within 2.3 kilometers (1.4 miles) of the current Project area. All of these archaeological resources were initially identified on the basis of surface observations. These data indicate that extensive subsurface exploration is not standard in the area and where it has been done, it did not result in identification of subsurface archaeological deposits. These data also show that all of the previously identified archeological resources in the area contain artifacts at the surface along with any subsurface deposits that might be present.

Our own experience with archaeological work in this region suggests that shovel testing is not a good method for detecting archaeological resources. As I noted in our phone call, on a wind energy project about 27 kilometers (17 miles) east-southeast of the Westside Solar Project, AINW excavated 107 shovel tests in an area of approximately 188 acres where 13 sites and 6 isolates were identified based on surface survey. Only one artifact was found in the shovel tests. The artifact was a CCS flake found in the upper 10 centimeters (4 inches) of the shovel test and near an archaeological site originally identified on the basis of surface survey. The artifact in the shovel test became part of the adjacent site. All of the other shovel tests lacked artifacts. This project was also located in an erosional sedimentary environment.

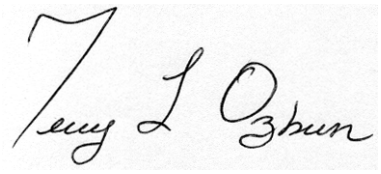
Based on the surface expression of all sites in the Westside Solar Project area, the poor results of shovel testing in a nearby project, and our geoarchaeological interpretation of depositional environments of the Westside Solar Project area, it seems unlikely that additional shovel testing would result in identification of additional archaeological deposits, regardless of the depth of excavation. Our experience in shovel testing on thousands of projects shows that most archaeological sites in the region are shallowly buried, if buried at all. That is the reason for our standard depth of 50 centimeters (20 inches) for shovel tests unless there is some specific reason to expect archaeological deposits to be deeper. I am not familiar with the 100-centimeter (40-inch) depth for shovel testing you reference in your letter. It is generally difficult to dig deeper than about 80 centimeters (28 inches) in a 30-centimeter (12-inch) diameter shovel test in any case.

Regarding your comment on the soil and sediment descriptions for the shovel tests, we included a paragraph in our report on this subject at the top of page 7. We typically do not tabulate these data for individual shovel tests unless they are relevant to analysis of identified archaeological deposits and interpretation of the sedimentary depositional history of those archaeological deposits. Since there were no archaeological deposits to analyze for depositional history, we did not provide additional descriptive data on soils or sediments.

In summary, I believe that additional shovel testing for the Westside Solar Project would not result in identification of archaeological resources. The pedestrian surface survey and shovel testing in the two high probability areas appears to meet or exceed the level of effort used in previous cultural resource surveys conducted in the area. All of the known archaeological resources in the area were identified on the basis of surface survey. A previous project in the same region showed that shovel testing was not effective in identification of archaeological sites where erosional surfaces are present. These data, along with consideration of the depositional contexts of the Westside Solar Project, suggest that a “reasonable and good faith effort” was used to identify cultural resources, including subsurface

archaeological deposits. Please let me know if you agree that further effort is not needed to identify archaeological resources for the Westside Solar Project.

Sincerely,



Terry Ozbun, M.A., R.P.A.
PM/Senior Archaeologist

CC: Bill Richards and Catherine Billor, Ecology & Environment
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